PB-230 290

THE OYSTER-BASED ECONOMY OF FRANKLIN COUNTY, FLORIDA

Marshall R. Colberg, et al

Florida State University
Tallahassee, Florida

July 1965

DISTRIBUTED BY:

NTIS

National Technical Information Service
U. S. DEPARTMENT OF COMMERCE
5285 Port Royal Road, Springfield Va. 22151

PB 230 290

The Oyster-Based Economy of Franklin County Florida

By MARSHALL R. COLBERG Ph. D.

and DOUGLAS M. WINDHAM, A.B.

Florida State University, Tallahassee, July 1965

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
Public Health Service

LOCATION OF FRANKLIN COUNTY

TABLE OF CONTENTS

	Page
Title Page	I
Frontispiece—Location of Franklin County	II
Preface	V
Chapter 1—The Industry and the County	1
2—Economic Base Analysis of Franklin County	11
3—Value Added Analysis of the Franklin County Oyster Industry	17
4—Summary of Results	21

PREFACE

This study has been made under a contract between Florida State University and the U.S. Public Health Service of the Department of Health, Education, and Welfare. The project officer, Mr. Richard J. Hammerstrom, Director of the Gulf Coast Shellfish Sanitation Research Center at Dauphin Island, Ala., gave valuable advice at several stages and provided many useful contacts. Mr. Eugene T. Jensen, Chief of the Shellfish Sanitation Branch, Division of Environmental Engineering and Food Protection of the U.S. Public Health Service provided much of the original impetus to the contract and the entire study. Dr. Winston Menzel of the F.S.U. Oceanographic Institute was a project director along with Dr. Marshall R. Colberg, chairman of the F.S.U. Department of Economics. Mr. Douglas M. Windham, a graduate student in economics, was the research technician on the project and a coauthor of the final report. Because of the economic nature of the study, Dr. Menzel did not participate in preparation of the final report although he gave valuable advice related to the study. Mr. Robert Ingle of the Florida Board of Conservation also gave useful counsel, and Mrs. David H. Wallace, Director of the Oyster Institute of North America, was helpful in providing industry contacts.

The assistance of a large number of persons, in addition to those already mentioned, is gratefully acknowledged. Mr. Percy Thompson of the Apalachicola Office of the Fish and Wildlife Service, U.S. Department of the Interior, cheerfully devoted many hours in a busy schedule to making special tabulations and explaining the nature of the oyster industry. He also permitted Mr. Windham to accompany him on visits to oyster packing houses.

Special thanks are due to three employees of Allen Kirkpatrick and Company, Inc. Mr. Don Turner, Mr. Walter J. Lehman, Jr., and Mr. Richard C. Mahon made available a great volume of data without which it would have been impossible to make value-added estimates of a reasonably reliable sort. Similar detailed information from his own records was made available by Mr. James McNeil.

A great many persons cooperated in making possible the complete labor survey of Franklin County upon which the economic base study depends. Mr. W. W. Creekmore, Mr. James Daly, Mr. Rodman Porter, and Mr. R. E. Connell gave us both general guidance and data. Mr. George Wefing organized the Apalachicola survey by members of the local Chamber of Commerce. Among those who interviewed Apalachicola businessmen were Mr. C. A. Marks, Jr., Mr. W. C. Buzzett, Mr. W. H. Wright, Mr. E. E. Sizemore, and Mrs. Judy Hoffman. Mr. John C. Moore interviewed firms in both Carrabelle and Eastpoint.

Finally, as is always the case when a deadline is to be met, our secretarial staff consisting of Mrs. G. W. Jordan and Mrs. Frank Kessler worked both hard and cheerfully to accomplish their part of the mission.

Tallahassee, Florida
July 1965

MARSHALL R. COLBERG
DOUGLAS M. WINDHAM

Chapter 1

THE INDUSTRY AND THE COUNTY

That delicious bivalve, the oyster, has been subjected to a tremendous amount of scientific investigation by biologists, public health officials, and others over the years. Nevertheless, the opinion is sometimes expressed by experts that there is danger of the virtual disappearance of the oyster industry—at least in its present form—in this country within the next few decades. In addition to natural enemies and disease, threats to survival of this sedentary animal include industrial wastes, domestic sewage, oil dumped or lost in the sea, and radioactive materials.

Relatively little attention has been paid to the economics of the oyster industry. Yet the institutional arrangements which usually exist add another threat to continuation of an adequate supply of oysters. Foremost is the "commonality" problem where many individual tongers work publicly-owned oyster beds, each imposing costs on the others and each having no strong personal incentive to engage in conservation measures. Lacking ownership of the bottoms which he works, any steps taken by an individual tonger to conserve oysters are not only unlikely to bring him personal advantage but tend to work to his monetary disadvantage. At the same time private leaseholds, while theoretically providing adequate incentive for optimal conservation practices, may not be the answer because of the great difficulty of policing such leaseholds in an open bay.

The present study is not aimed at suggesting what institutional changes may be necessary or desirable, although some of the data should be useful to persons interested in this problem. The situation of common ownership of an economic resource exists for almost the whole of the fishing industry rather than being peculiar to oyster gathering.[1] It is also frequent in the use of other resources such as highways, public parks, and the atmosphere where littering, carving of initials and air pollution, respectively, are examples of a sort of inadequate conservation of public property.

Purpose of Study

The object of the present study is twofold: First, to determine the importance of the oyster industry to the residents of Franklin County, Fla.; and second, to estimate the magnitude of the value added to oysters at various stages of production and distribution. The first of these objects amounts to an economic base study to determine how much employment and income is generated locally by oysters and other products sent out of Franklin County. The second object amounts to determination of the national, rather than local, importance of the county's oyster industry. Presently available measures of the size of the oyster industry refer to value at the fishermen's level. However, as in the case of most agricultural products, a greater amount of value is added after the commodity leaves this stage. This value must be measured if a reasonably accurate impression is to be gained of the amount of national income that would be lost if this part of the oyster industry were to be eliminated by pollution or other causes. It is true that in the longer run a portion of the resources now devoted to "catching,"

[1] See, for example, H. Scott Gordon, "The Economic Value of a Common Property Resource: The Fishery," *Journal of Political Economy*, April 1954; J. A. Crutchfield, "Common-Property Resources and Factor Allocation," *Canadian Journal of Economics and Political Science*, August 1956; and J. W. Milliman, "Commonality, the Price System, and Use of Water Supplies," *Southern Economic Journal*, April 1956.

processing, and distributing oysters from Franklin County could be reallocated to other activities. Nevertheless, the specialization and geographic immobility of people and equipment is such that most of the yearly loss of national income would be a permanent one. That is, reallocation of resources to other activities might be about as unsuccessful as reallocation of miners, land, and machinery has been in the declining coal mining districts of West Virginia and Pennsylvania.

General Description of County and Industry

Although the present study was first conceived to be one of the oyster industry of Apalachicola, Fla., it soon became evident that Franklin County as a whole provided a more satisfactory geographic unit. Eastpoint, which is separated from Apalachicola by Gorrie Bridge, and to a lesser extent Carrabelle, still farther to the east within the county, are also important producers of oysters and other seafoods. These are all relatively isolated communities bounded to the north by forest land, much of which is swampy, and to the south by the Gulf of Mexico. Agriculture is almost nonexistent in the county.

Offshore islands, with developing resort potential, and the Apalachicola River provide the bays and water conditions essential for the growth, fattening, and reproduction of oysters.[2] An important advantage possessed by Apalachicola oysters is that they feed and grow throughout the year. Also their reproductive season may last for 7 months whereas northern oysters feed and grown for about 6½ months and reproduce only during two summer months.[3] The time necessary for growth to legal size (3 inches) is half of that needed in northern waters.

Franklin County lags far behind most parts of Florida in population growth. Indeed, the 1940 and 1950 censuses counted fewer persons than in 1930, as is shown in table 1. Since 1950 the population has been gaining slowly but from the long view Franklin County remains a much smaller segment, proportionally, of the Florida economy than it was a century ago.

TABLE 1.—*Population of Franklin County, Florida*

Year	Number of persons	Year	Number of persons
1840	1, 030	1920	5, 318
1850	1, 561	1930	6, 283
1860	1, 904	1940	5, 991
1870	1, 256	1950	5, 814
1880	1, 791	1960	6, 576
1890	3, 308	1961	7, 000
1900	4, 890	1962	7, 100
1910	5, 201	1963	7, 300

Source: Various volumes of the U.S. Census of Population. The 1961, 1962, and 1963 figures are estimates of the Bureau of Economic and Business Research, College of Business Administration, University of Florida.

The population decline during the decade of the 1930's was probably due to the falling off of demand for oysters during the severe depression. Compared with most meat, fish, and poultry, oysters are a high-priced source of proteins, carbohydrates, and fats. The income elasticity of demand is substantial; consequently the drastic decline in national income during the 1930's affected the relative demand for oysters seriously. George M. Woodward has determined, however, that volume of production of oysters and the price of meat are more important than disposable personal income as determinants of the price received by the oyster fisherman.[4]

Income in Franklin County

Fishermen are almost always among the low-income groups in a region although their real income is somewhat higher than dollar data indicate because of direct consumption of the product. In 1962, in the State of Florida, only Holmes, Calhoun, Walton, Washington, Wakulla, and Baker Counties had lower per capita personal income in dollars than Franklin. In 1963 Franklin County made an improved showing, as may be seen in table 2, but per capita income was still only two-thirds of the Florida average.

[2] See Paul S. Galtsoff, *The American Oyster*, Fishery Bulletin, Vol. 64, U.S. Department of the Interior, Fish and Wildlife Service, Bureau of Commercial Fisheries (Washington, G.P.O., 1964) pp. 400–414 for physical characteristics of oyster-producing waters.

[3] Galtsoff, *ibid.*, p. 407.

[4] *Commercial Fisheries of North Carolina* (Chapel Hill: Bureau of Business Services and Research, University of North Carolina, 1956) p. 56.

TABLE 2.—*Personal Income Per Capita—Florida and Franklin County*

Area	1954	1959	1960	1961	1962	1963
Florida	$1,534	$1,960	$1,985	$1,990	$2,065	$2,158
Franklin County	680	944	1,000	968	1,031	1,460

Source: *Ibid. and Statistics of Personal Income, Taxation, and Construction for Florida and Florida Counties*, Bureau of Economic and Business Research, University of Florida, 1964.

For the United States as a whole, 1962 personal income per capita was $2,366.[5] Even Mississippi had personal income per capita of $1,285 compared with Franklin County's $1,031. To a greater extent than usual, family income in Franklin County is derived from the work of wives as well as husbands. The typical arrangement is that wives shuck oysters brought in by their husbands to the packer's shore establishment.

Retail Sales

Although Franklin County has lagged far behind most of the State in population and economic growth, its coastal location is a factor which favors its future development. Examination of the *1960 U.S. Census of Population* shows a decided movement of people toward all of the Nation's seacoasts. Few of the 13 Florida counties that had a net loss of population between the 1950 and 1960 censuses touch the Gulf of Mexico or the Atlantic Ocean.

A good measure of economic conditions in Florida counties is available in the Comptroller's retail sales data collected in connection with administration of the State sales tax. Table 3 shows monthly retail sales, both total and taxable (food being one of the important exemptions), and total sales tax collections. Since January 1957, retail sales in Franklin County have shown an upward trend which is about in line with total retail sales in the United States. (The latter increased from $200 billion in 1957 to $246.4 billion in 1963.) Chart 1 shows total yearly retail sales (including both taxable and nontaxable) for Franklin County from 1957 to 1964. Part of the dollar volume increase for the county and the country is attributable to higher prices rather than greater volume. The consumer price index (1957–59=100) rose from 98 in 1957 to 106.7 in 1963.

The seasonal pattern of retail sales in Franklin County is somewhat surprising in view of the importance of the oyster industry and the decline in both oyster volume and prices during the summer months. Although the month-to-month variation in all retail sales is not highly uniform each year, January sales have averaged the highest, with a pronounced decline in February and March followed by a rise through September. This seasonal index of retail sales computed after adjustment for number of days in the month and with January=100, is shown in chart 2.

[5] Source: U.S. Department of Commerce, *Survey of Current Business*, August 1963.

TABLE 3.—*Retail Sales and Sales Tax, Franklin County, 1957–65*

Year	Month	Gross sales	Taxable sales	Tax paid
1957	January	$433,565.63	$122,327.16	$4,083.69
	February	329,360.77	79,818.12	2,588.17
	March	364,794.89	85,886.66	2,774.60
	April	379,633.22	96,979.37	2,907.90
	May	387,016.04	97,038.75	3,100.36
	June	362,142.56	103,205.52	3,433.31
	July	441,545.17	116,207.27	3,680.76
	August	406,190.45	165,746.68	5,136.58
	September	434,847.84	162,490.12	5,352.68
	October	377,779.16	148,286.85	4,388.01
	November	415,705.56	170,791.01	5,127.41
	December	335,468.11	127,128.32	4,010.24
	Total retail sales for year	4,668,094.40		

791-111—66——2

TABLE 3.—*Retail Sales and Sales Tax, Franklin County, 1957–65*—Continued

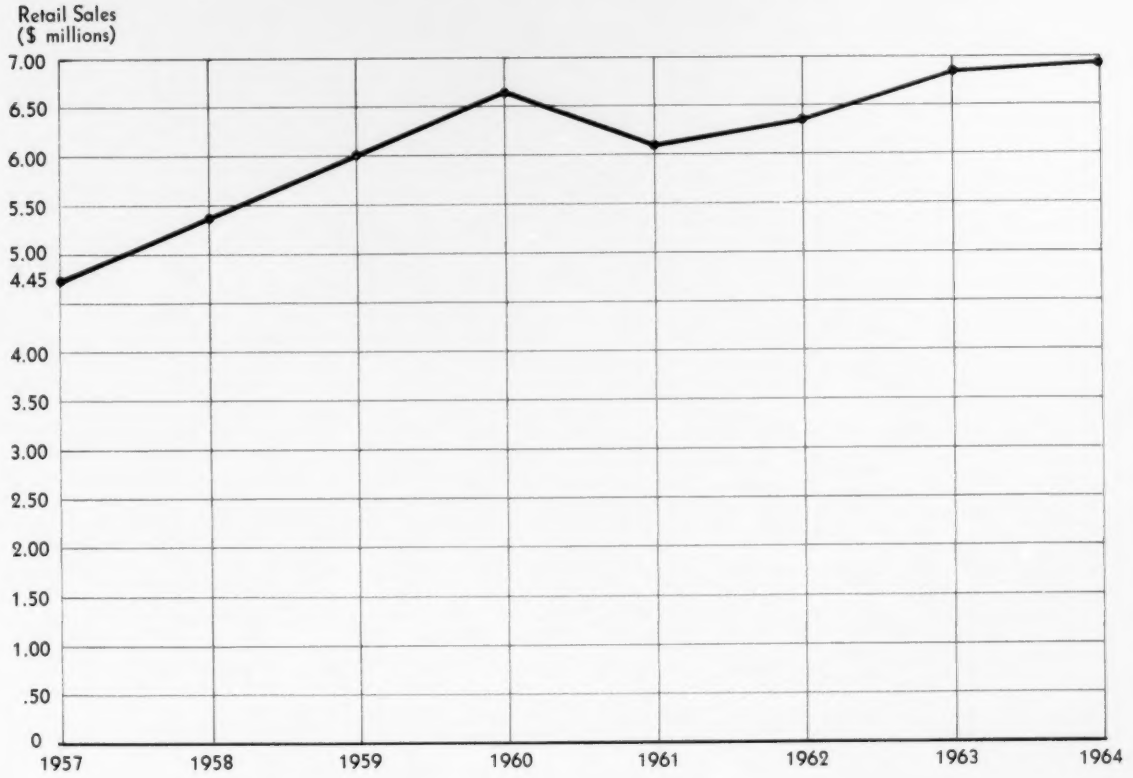
Year	Month	Gross sales	Taxable sales	Tax paid
1958	January	$494,064.99	$191,251.29	$5,838.46
	February	354,909.17	130,494.52	3,838.63
	March	345,581.07	116,742.71	3,491.61
	April	349,663.17	124,860.58	3,825.29
	May	439,348.64	159,191.48	4,857.24
	June	381,424.46	150,600.31	4,922.62
	July	549,136.12	204,608.24	6,247.78
	August	476,490.40	180,985.87	5,870.57
	September	467,728.95	184,968.91	5,664.99
	October	445,062.29	148,901.51	4,709.81
	November	481,984.23	188,059.86	6,123.44
	December	463,661.15	167,256.40	5,154.20
	Total retail sales for year	5,249,054.64	----------	----------
1959	January	557,988.42	213,201.89	6,349.35
	February	426,616.82	142,092.45	4,198.40
	March	464,574.20	161,433.37	4,293.62
	April	418,456.47	159,812.50	4,507.70
	May	909,429.99	181,362.49	5,388.97
	June	499,921.61	173,152.43	5,596.35
	July	537,841.76	211,947.81	12,768.35
	August	524,891.93	279,918.64	9,345.54
	September	530,951.12	269,558.36	8,623.86
	October	481,315.73	244,203.04	7,780.74
	November	533,616.14	253,474.66	8,330.61
	December	525,158.69	274,747.24	8,335.14
	Total retail sales for year	6,010,762.88	----------	----------
1960	January	618,262.18	323,212.25	12,534.01
	February	482,722.87	233,657.59	7,815.05
	March	470,821.66	230,442.49	6,963.91
	April	518,324.43	276,999.72	8,150.42
	May	524,470.69	260,960.55	8,351.84
	June	665,582.76	405,373.69	11,489.22
	July	559,252.83	281,931.42	8,888.33
	August	604,654.39	336,844.77	10,235.87
	September	594,246.76	313,433.50	9,776.83
	October	525,113.40	263,963.73	8,496.15
	November	570,445.77	269,580.09	8,366.55
	December	509,060.04	235,512.73	8,139.77
	Total retail sales for year	6,642,957.78	----------	----------
1961	January	581,917.69	305,953.06	9,983.51
	February	491,286.91	194,364.88	6,897.58
	March	436,552.94	196,697.86	7,057.75
	April	453,841.07	204,333.40	1,239.59
	May	460,498.76	228,043.01	7,728.34
	June	511,417.18	241,599.92	7,729.90
	July	494,751.99	238,074.50	8,061.03
	August	589,019.55	311,705.42	10,219.08
	September	495,918.80	237,578.94	7,948.90
	October	498,331.82	250,606.64	8,215.32

TABLE 3.—*Retail Sales and Sales Tax, Franklin County, 1957–65*—Continued

Year	Month	Gross sales	Taxable sales	Tax paid
1961—Con.	November	$542, 256. 74	$260, 081. 29	$8, 489. 32
	December	473, 896. 69	226, 177. 52	7, 503. 93
	Total retail sales for year	6, 029, 690. 14		
1962	January	588, 497. 51	299, 486. 59	9, 824. 65
	February	484, 742. 44	210, 563. 94	6, 812. 40
	March	428, 983. 20	207, 873. 10	6, 707. 81
	April	528, 363. 59	239, 063. 10	7, 907. 00
	May	464, 282. 67	224, 978. 74	7, 246. 45
	June	526, 848. 92	271, 858. 65	8, 230. 41
	July	522, 274. 89	263, 306. 58	8, 461. 67
	August	556, 421. 09	295, 620. 00	9, 123. 51
	September	567, 106. 83	289, 569. 49	9, 035. 33
	October	590, 358. 34	260, 372. 49	8, 316. 83
	November	573, 376. 18	280, 177. 11	8, 550. 97
	December	544, 907. 59	270, 693. 92	8, 561. 60
	Total retail sales for year	6, 376, 163. 25		
1963	January	998, 014. 81	337, 328. 38	9, 886. 27
	February	489, 871. 84	220, 520. 55	7, 130. 11
	March	465, 197. 64	220, 257. 30	6, 884. 49
	April	506, 145. 30	257, 972. 70	7, 533. 88
	May	554, 241. 99	310, 928. 01	8, 331. 18
	June	539, 069. 28	321, 802 21	8, 910. 62
	July	534, 907. 77	304, 409. 92	8, 759. 36
	August	567, 694. 72	325, 445. 58	9, 444. 84
	September	575, 718. 31	347, 159. 05	10, 300. 46
	October	528, 831. 94	285, 218. 73	8, 617. 64
	November	531, 710. 62	297, 757. 06	8, 485. 90
	December	571, 445. 82	316, 236. 42	9, 123. 17
	Total retail sales for year	6, 862, 850. 04		
1964	January	559, 293. 31	299, 804. 29	8, 632. 46
	February	459, 544. 02	232, 541. 90	6, 746. 14
	March	454, 606. 60	243, 603. 56	6, 939. 85
	April	568, 075. 98	305, 048. 23	8, 693. 11
	May	575, 637. 36	307, 581. 45	8, 889. 85
	June	593, 838. 21	326, 469. 95	9, 390. 63
	July	701, 044. 00	386, 718. 60	11, 287. 21
	August	626, 222. 32	348, 470. 97	10, 111. 70
	September	664, 466. 94	393, 612. 47	11, 356. 42
	October	555, 158. 65	290, 163. 32	8, 470. 02
	November	578, 355. 91	318, 973. 67	8, 913. 15
	December	554, 430. 87	308, 892. 83	8, 933. 08
	Total retail sales for year	6, 890. 674. 17		
1965	January	695, 333. 77	385, 113. 88	11, 243. 88
	February	532, 190. 26	259, 735. 78	7, 754. 25
	March	522, 242. 97	262, 698. 77	7, 757. 62
	April	557, 128. 86	268, 118. 61	8, 216. 27
	May	645, 640. 94	333, 394. 83	9, 885. 12
	Total retail sales through May	2, 952, 536. 80		

Source: Office of the Comptroller, State of Florida.

CHART 1.— *Total Retail Sales, Yearly, Franklin County, Florida*



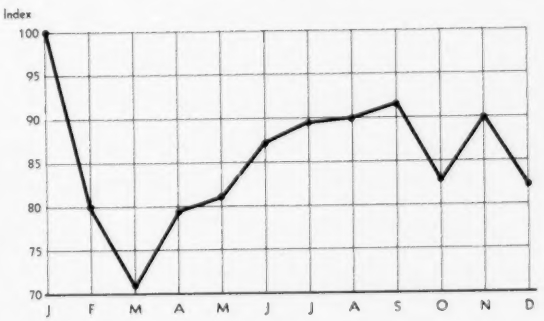
It appears that tourism and fishing other than for oysters make the summer months quite active commercially in Franklin County. This is especially true of the shrimp industry which continues to grow in importance. Also, the law which prior to 1965 has permitted the catching of two gallons of oysters per person per day for "family use" during the summer months has actually maintained substantial oystering activity during the nominally closed season. The 1965 legislature removed this loophole in the conservation law, and the new law now provides a definitely closed season in June, July, and August in Franklin, Gulf, and Wakulla counties. The new law, chapter 65–905, acts of 1965, also sets a 3-inch-length limit with no more than 15 undersized oysters per 100 permitted.

U.S. Oyster Industry

A drastic downward trend in total production of Eastern oysters since 1920 is apparent in table 4: 1963 production was only 43 percent of the 1920 total. When the large increase in United States population is considered the relative decline is even sharper. Per capita production (and presumably consumption) was approximately one pound per person per year just after World War I but averaged only about one-fourth of a pound per person in recent years. This is shown graphically in chart 3.

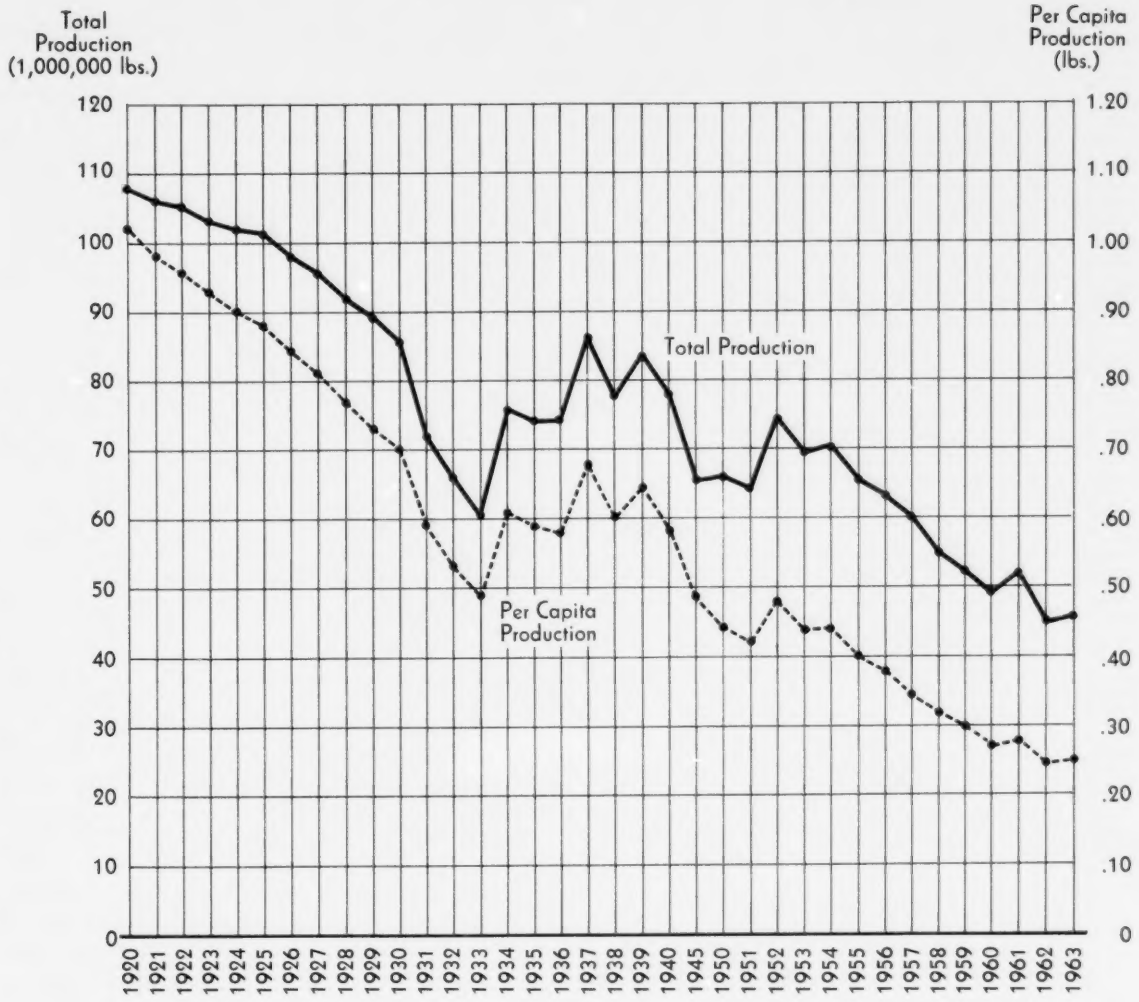
CHART 2.—*Seasonal Index of Retail Sales, Franklin County, Florida, 1957–64*

January=100



Source: Office of the Comptroller, State of Florida, with calculations by authors.

CHART 3.—*Total and Per Capita Production of Eastern Oysters, 1920–63*



Value of the catch to the oyster fishermen declined severely during the depression of the 1930's, as shown in table 5. Since 1950 it has held within the range $26–$32 million per year in spite of the decline in production. Years of especially large output such as 1952 and 1954 returned large dollar amounts to fishermen, while poor production years such as 1960 and 1962 brought lower dollar returns to fishermen. In 10 of the 12 years, 1950–62, dollar value to fishermen changed in the same direction as did the volume of the oyster harvest. The indication is that, unlike most agricultural crops, the demand for oysters in recent years is somewhat elastic—that is, an increase in output does not require an offsettingly large decrease in price to move the product.[6] Or, stated differently, any meaures which succeed in raising total oyster supply should result in more dollar income to oyster fishermen.

A paradox in the conservation of agricultural land is that farm income is raised by not cultivat-

[6] This observation is not the same as that made by George M. Woodward, *op. cit.*, p. 57, who suggests an inelastic demand for oysters. A special investigation of this nature is needed, but it appears that the situation with respect to elasticity of demand may have changed since Woodward made his excellent study of the North Carolina commercial fisheries a decade ago.

TABLE 4.—*Per Capita Production of Eastern Oysters 1920–63*

Year	Population (1,000 people)	Production of oyster meats (1,000 lbs.)	Per capita production of oysters (in lbs.)
1920	106, 466	108, 380	1. 02
1921	108, 541	106, 519	. 98
1922	110, 055	105, 248	. 96
1923	111, 950	103, 978	. 93
1924	114, 113	102, 919	. 90
1925	115, 832	102, 313	. 88
1926	117, 399	98, 265	. 84
1927	119, 038	96, 154	. 81
1928	120, 501	92, 590	. 77
1929	121, 770	89, 318	. 73
1930	123, 077	86, 255	. 70
1931	124, 040	72, 799	. 59
1932	124, 840	66, 052	. 53
1933	125, 579	61, 531	. 49
1934	126, 374	76, 565	. 61
1935	127, 250	74, 444	. 59
1936	128, 053	74, 368	. 58
1937	128, 825	87, 386	. 68
1938	129, 825	77, 874	. 60
1939	130, 880	84, 020	. 64
1940	132, 457	78, 381	. 59
1945	133, 434	65, 421	. 49
1950	151, 868	66, 101	. 44
1951	153, 982	64, 280	. 42
1952	156, 393	75, 142	. 48
1953	158, 956	69, 301	. 44
1954	161, 884	70, 971	. 44
1955	165, 069	65, 835	. 40
1956	168, 088	63, 206	. 38
1957	171, 187	59, 996	. 35
1958	174, 149	55, 161	. 32
1959	177, 135	52, 338	. 30
1960	179, 983	48, 982	. 27
1961	183, 043	52, 098	. 28
1962	185, 822	45, 283	. 24
1963	188, 616	[1] 46, 600	. 25

[1] Preliminary.

Source: *Statistical Abstract of the United States, 1964*, Bureau of the Census, U.S. Department of Commerce. Various Yearly Volumes of *Fishery Statistics of the U.S.*, U.S. Department of the Interior, Fish and Wildlife Service, Bureau of Commercial Fisheries.

ing part of the land which already exists. This situation does not appear to the present for oystering since, as noted above, more oyster output tends to raise oyster fishermen's incomes. The above economic characteristic of the oyster industry supports the value of sound conservation practices to the industry as a whole.

TABLE 5.—*Value of Eastern Oysters to Fishermen*

Year	$1,000	Year	$1,000
1920	12, 194	1938	7, 690
1921	12, 448	1939	7, 509
1922	12, 783	1940	7, 713
1923	13, 118	1945	23, 283
1924	13, 469	1950	27, 393
1925	13, 892	1951	27, 076
1926	13, 792	1952	30, 307
1927	13, 899	1953	27, 277
1928	13, 607	1954	30, 950
1929	12, 905	1955	27, 992
1930	11, 592	1956	28, 061
1931	7, 163	1957	27, 170
1932	5, 692	1958	28, 255
1933	4, 846	1959	27, 163
1934	6, 010	1960	26, 965
1935	6, 249	1961	31, 184
1936	7, 330	1962	26, 511
1937	7, 917		

Source: Various yearly volumes of *Fishery Statistics of the United States*, U.S. Department of the Interior, Fish and Wildlife Service, Bureau of Commercial Fisheries.

Geographic Distribution of U.S. Oyster Production

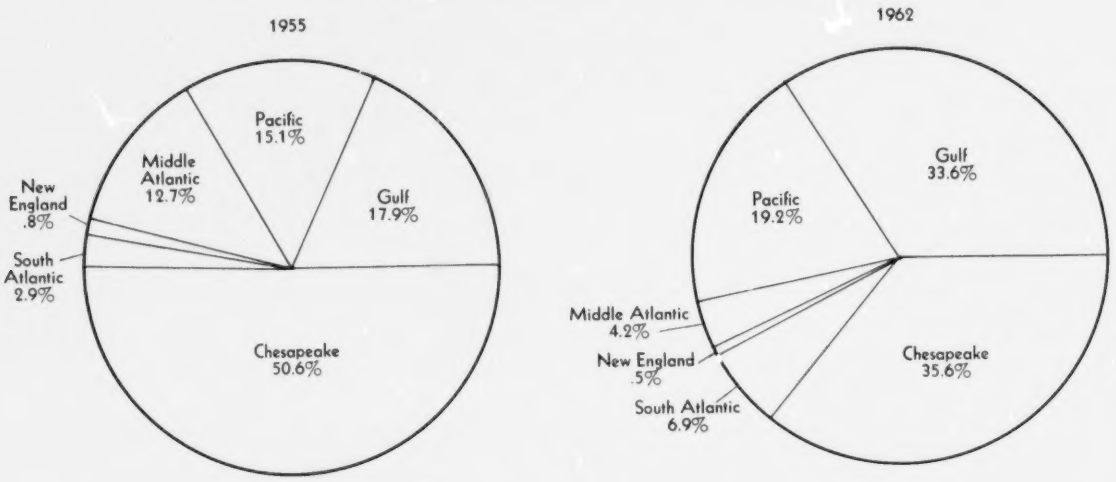
Apalachicola Bay gained in importance as a source of oysters between 1955 and 1962. In 1963 and 1964 the catch fell off seriously but industry sources predict that there will be a good gain in 1965. Franklin County landings totaled about 4.4 million pounds of meats in 1962, 3.8 million pounds in 1963, and 2.3 million pounds in 1964. Although the Franklin County oyster harvest was off in 1963, the Gulf States as a whole established a new record of nearly 23 million pounds. During the same year the catch of Chesapeake oysters fell to a new low of 18 million pounds.[7] Imports of oysters hit a new high of 8.3 million pounds in 1963.[8] It is important to note, however, that foreign oysters compete more strongly with Pacific than with Eastern oysters. This is because the forms in which they are sold (especially smoked) are quite different from the forms (fresh, breaded, stew) in which Eastern oysters are sold.

Fuller data by region are presently available for the year 1962. The decline in relative volume of Chesapeake and Middle Atlantic landings and

[7] E. A. Power, *Fisheries of the United States, 1963* (A preliminary Review) C.F.S. No. 3500 (Washington, April 1964).

[8] *Ibid.*, p. ix.

CHART 4.—*Share of regions in volume of oyster landings, 1955 and 1962*



the increase in the Gulf, South Atlantic, and Pacific shares from 1955 to 1962 shows up in chart 4. When it is considered that some of the Chesapeake oysters were actually transplanted from the Gulf, it appears that the Gulf and Chesapeake oyster fisheries were of about equal magnitude in 1962. On a value to fishermen basis, however, the Chesapeake landings were far ahead of the Gulf landings even in 1962, as may be seen in chart 5. This is due to the higher price received for Chesapeake oysters, both shucked and in the bag.

Prices received by wholesalers per gallon of shucked oysters are shown by region in table 6. Middle Atlantic, Chesapeake, and New England oysters have consistently brought the highest prices for the Eastern variety. Pacific oysters gained relatively little in price over the 1955–62 period. The extent of competition between Eastern and Pacific oysters appears to be limited because of the species and size difference which exists.

CHART 5.—*Share of regions in value of oyster landings, 1955 and 1962*

TABLE 6.—*Average Prices Per Gallon of Shucked Oysters, by Region and by Year—1955–62*

Region	Price per gallon—shucked oysters							
	1955	1956	1957	1958	1959	1960	1961	1962
New England	$6.55	$7.19	$9.48	.....	$8.31	$7.99	$8.35	$8.06
Middle Atlantic	6.85	7.02	7.46	$7.39	8.34	8.3	8.54	11.13
Chesapeake	5.98	6.01	5.15	6.21	6.14	7.23	7.90	8.09
South Atlantic	4.80	5.64	5.22	4.96	5.65	5.77	6.21	6.33
Gulf	5.36	5.84	6.00	5.99	5.88	6.07	6.16	6.32
Florida west coast [1]	n.a.	n.a.	4.47	4.27	5.25	5.53	5.75	5.72
Pacific	3.58	3.43	3.37	3.37	3.28	3.27	4.00	3.89
United States	5.76	5.81	5.72	5.86	5.74	6.26	6.70	6.79

[1] Quantity and value were included in Gulf calculations.

Source: Various yearly volumes of *Fishery Statistics of the U.S.*, U.S. Department of the Interior, Fish and Wildlife Service, Bureau of Commercial Fisheries.

Chapter 2

ECONOMIC BASE ANALYSIS OF FRANKLIN COUNTY

An economic base study seeks to determine the key economic activities which generate income and employment within a community.[9] Goods and services which local firms sell outside the community are called "exports." Usually these are sold within the same country making the term "export" much broader than the common meaning of sales to foreign countries. As in the latter, however, sales to residents of another area which take place in the home area are included with exports. That is, sales of food by a restaurant in Paris to American tourists are a French export; similarly, sales by a motel within a county to out-of-county tourists are an export by the county.

Exports from a community are considered to be the prime mover of the local economy. This is more nearly a correct assumption for a small community than for a large one. It is not true at all for the world considered as a single area (although this can change somewhat as activities in space are expanded). The assumption is highly pertinent for a town such as Apalachicola which depends heavily for its livelihood on oysters and other seafood with all but 1 or 2 percent destined for final consumption outside the community. Heavy concentration of this sort on a particular industry gives a community a narrow economic base, increasing its vulnerability to unfavorable changes in demand for, or supply of, the key commodity.

Employment related to exports from a community is often called "basic," while employment which serves the local market is called "nonbasic." In a sense these terms are misleading since they may imply that one type of work is more important than another even where value productivity is the same. Nevertheless the distinction is useful since it can be considered that the only reason for some activities is to serve the people employed in the basic occupations. In this sense basic industry and employment is "more important."

In the short run there may be a good deal of variation in the ratio of basic to nonbasic jobs. However, if a decline (increase) in basic employment occurs due to a change in supply-demand conditions related to exports, the number of nonbasic jobs should over a longer period decline (increase) in about the same proportion. The assumption of a fixed proportion between export-based and domestically based jobs is convenient and fairly logical and it is the assumption usually made in economic base studies.

Since there is special interest in the basic employment generated by the oyster industry in Franklin County, an attempt has been made to distinguish these jobs from those generated by "other exports" (such as shrimp, fish, and crabs). Also, the tourist industry is of substantial importance to motels, restaurants, and sport fishing facilities and of some importance to retailing of food, clothing, fishing tackle, and other items. Consequently, the contribution of tourist demand to employment in Franklin County has been estimated separately. Sales to county residents as final consumers account for most of the other employment within the county. This includes most of the employment of such government agencies as the police department and post office. Finally, a considerable number of Franklin County residents work in Port St. Joe in adjacent Gulf County. This out-of-county employment has been separately tabulated. Such employment can be considered to be a type of basic employment related to exports—the export of labor services.

[9] See Charles M. Tiebout, *The Community Economic Base Study*, Supplementary Paper No. 16, Committee for Economic Development, December 1962, for an especially clear description of the nature of an economic base study and results for Los Angeles.

Procedure

Published data on employment in Franklin County are not the sort needed for an economic base study. They are designed for other purposes, such as estimating the unemployment rate and its changes. Consequently it was necessary to conduct a special labor survey of Franklin County with the assistance of the chambers of commerce of Apalachicola and Carrabelle. Fortunately it was not necessary to interview persons in such difficult facilities as oyster boats, shrimp boats, oyster shucking houses, and other seafood establishments. This was true because of the carefully compiled information in the files of the U.S. Fish and Wildlife Service in Apalachicola and the excellent cooperation of that office. It was necessary, however, that representatives of all other firms and agencies in Franklin County be interviewed and that important Gulf County firms be asked to furnish data on their employment of Franklin County residents.

Exhibit 1 shows the questionnaire form utilized in this survey. While it would have been useful to secure sales data in dollars, representatives of the chambers of commerce advised that this would be resented by some businessmen and would endanger collection of accurate employment data by inducing noncooperation. (One retail store refused even to give the employment information requested.)

Peak employment for the year in Franklin County is often reached in November. Consequently November was chosen as the survey month for purposes of the economic base study. This "snapshot" approach avoids most of the problem of job shifting due to the seasonality of the different fisheries and to a lesser degree of tourism.

Businessmen were asked in individual interviews to report full-time employment in November 1963. Also they were asked to indicate the approximate distribution of their sales between consumers (household) and firms. Of the sales

EXHIBIT 1

SURVEY FOR ECONOMIC BASE STUDY OF FRANKLIN COUNTY

Name of Company_____

Type of Firm _____ Major Product(s) or Activity _____

Average Number of Persons (Including Proprietor) Employed Full Time in November 1963_____

Approximate Distribution of Sales in November 1963

Proportion Sold Directly to Consumers_____ _____%

Estimated % of These Direct Consumers Resident Outside Franklin County_____ _____%

Proportion Sold to Other Firms in November 1963_____ _____%

Estimated % of Related Sales Made by These Firms to Customers Outside Franklin County_____ _____%

Remarks:

Name and Position of Person Supplying Information

Name of Interviewer _____ Date _____

DEPARTMENT OF ECONOMICS, FLORIDA STATE UNIVERSITY, TALLAHASSEE, FLORIDA

This information will be kept confidential. Data will be combined with others and published only in totals.

made directly to consumers they were asked to estimate what percentage resided outside Franklin County. For sales made to firms the respondent was asked to estimate what percentage of related items these firms sold to customers outside the county. This estimate may be somewhat less dependable since it is not based on direct information of the respondent's own business. For example, a dealer in marine equipment may sell motors to local fishermen who in turn catch fish which are eventually sold almost entirely outside the county. The marine equipment dealer should enter nearly 100 percent as "Estimated percent of related sales made by these firms to customers outside Franklin County," so far as the motors are concerned. Indirectly these motors sales are related to exports rather than to demand by local residents even though the fishermen live in the county.

For many firms a portion of reported employment was allocated to exports from the county and part to sales to county residents. Take, for example, a firm reporting 10 full-time employees and reporting 80 percent of its sales as being made to consumers, of whom 50 percent resided outside the county, and 20 percent of its sales as being made to other firms which sold 100 percent of their own product out of the county. The 10 employees would be allocated as follows: 6 to exports, $10\times(0.80\times0.50)+10\times(0.20\times1.00)$; the remaining 4 would be allocated to sales to county residents.

Employment reported in November 1963 was allocated in the above manner for each firm and agency to one or more of the following: (1) Oyster related; (2) related to other exports; (3) related to tourism; (4) related to sales to county residents; and (5) out of county employment of Franklin County residents.

Oyster-related employment consisted mainly of 565 tongers and 708 shuckers and other workers in oyster shore installations, including repacking establishments. (These are U.S. Fish and Wildlife Service data, with duplication eliminated even though tongers may work part time in the shucking houses.) To a very substantial extent shuckers are wives of the oyster tongers. Other employment directly related to the oyster industry is found mainly in such agencies as the State board of conservation, the county health department, the Marine Laboratory, and the Fish and Wildlife Service. Almost all of this oyster-related employment is considered to be a type of export-generated employment.

Employment on shrimping and fishing vessels and on boats untilizing "handlines" (which includes lines attached to rods and reels) is also considered to be almost entirely export generated. These were an important source of employment of Franklin County residents (124 and 78 persons, respectively). Workers in related shore facilities such as fishhouses, crab meal processors, and crab shell polishers are classified as having their employment generated by "other exports" from the county. The same is true in whole or part for railroad employment, ice sales, sales of marine equipment and some other activities.

Tourism is an important source of income and employment in Franklin County although a large percentage of the tourists are passing through the county rather than having it as their final destination. This situation should gradually improve as the island beaches and freshwater fishing facilities are further developed. For purposes of the present economic base study, almost all of the employment in motels and sport fishing lodges and substantial portions (according to proprietors' estimates) of employment in gasoline filling stations, restaurants, and such agencies as the highway patrol are allocated to tourism.

Sales to county residents for their own consumption provide the "nonbasic" employment. In addition to most of the retail establishments, the schools, hospitals, churches, welfare agencies, post office, theaters, and some others depend wholly or mainly on purchases by local residents.

Several out-of-county firms provided jobs for Franklin County residents. By far the most important of these is the St. Joe Paper Co. mill in Gulf County. This type of employment has been classified separately in the present study. As already mentioned it can logically be added to export-based employment even though labor services alone—rather than commodities—are exported from Franklin County.

A summary of the November 1963 employment of Franklin County residents, according to the special survey conducted for the present study, is given in table 7.

The importance of the oyster industry is readily apparent, since about 46 percent of all employment was directly on oyster boats or in oyster shore installations. This does not, however, show the full importance of the oyster industry to employ-

TABLE 7.—*Employment of Franklin County Residents—November 1963*

Category	Number of full-time employees
Fishing industry:	
Oyster tongers	565
Oyster shore installations	708
Shrimp and fish vessels	124
Handline boats	78
Nonoyster shore installations	86
Total fishing	1,561
Other activities:	
Retailing and wholesaling (except seafood)	259
Manufacturing and repairs (except seafood) [1]	247
Government	161
Household workers [2]	144
Education	96
Utilities and railroads	55
Motels and hotels	41
Insurance, banking, and real estate	26
Religion	21
Miscellaneous	149
Total nonfishing	1,199
Total	2,760

[1] Includes 81 employed out of the county.

[2] This is the only category for which original data were not collected. Figure is taken from 1960 Census of Population.

TABLE 8.—*Oyster Value Related to Total Fishery Value, Franklin County [1]—1960–1964*

Year	Value of oysters	Value of total catch	Oyster value as percent of total value
1960	$436,190	$1,524,737	28.6
1961	934,242	2,036,214	45.9
1962	1,240,143	2,276,360	54.5
1963	1,089,803	2,180,746	50.0
1964	630,672	2,026,830	31.1

[1] Includes oysters taken from adjacent Gulf County but landed mainly in Franklin County.

Source: Apalachicola office, U.S. Department of the Interior, Fish and Wildlife Service.

ment within the community. For this purpose an economic base analysis, which traces to oyster and other exports many jobs in retailing, government, and education, for example, is needed. The indirect effects are emphasized in the remainder of this chapter.

The oyster industry as it exists in Franklin County is highly "labor intensive," featuring heavy use of labor and little use of capital. It can be seen in table 8 that in 1963 the oyster harvest in Franklin County accounted for half the value of the total catch (oysters, shrimp, finfish, etc.) in Franklin County. Yet over 80 percent of those engaged in all fishing activities in November 1963, were connected with the oyster industry. While November is an especially active month for oystering, much of this situation is due to the extent of hand labor involved in catching, shucking, and cleaning oysters.

Employment by Source of Demand

A more fundamentally informative summary of Franklin County employment than that of table 7 is made in table 9. This table incorporates the philosophy of the economic base study since it shows where the demand originates that provides jobs within the county rather than merely showing the nature of the establishments for which people are working.

Jobs shown in the column farthest to the right in table 9 are those falling directly in the industries shown in the left hand column. To this extent table 9 is similar to table 7. The other data columns, however, give added information based on analysis of the questionnaires along the lines indicated earlier in this chapter. For example, of the 1,273 full-time jobs in the oyster industry of Franklin County 1,247.6 are attributed to oyster exports from the county, 12.7 to sales to tourists visiting the county, and 12.7 to sales to county residents. (It is not implied that the allocation is accurate to one-tenth of a job: the decimal place is kept for convenience.) Another example of the meaning of table 9 can be seen in row 3. Of the 259 jobs in retailing and wholesaling (excluding the handling of fishery products) about 87 are attributed to tourism, 13 to exports other than of fishery products, and 159 to sales to Franklin County residents. Similarly it can be seen that about 101 of the 161 jobs in government are attributed to providing services for county residents.

TABLE 9.—*Franklin County Employment Allocated by Industry and Source of Demand—November 1963*

Industry	Oyster exports	Tourism	Other exports	Sales to county residents	Out of county firms	Total
Oyster industry	1,247.6	12.7		12.7		1,273
Other fisheries			282.2	5.8		288
Retailing and wholesaling		86.9	13.2	158.9		259
Motels and hotels		39.7		1.3		41
Religious institutions		4.1		16.9		21
Nonseafood manufacturing and repairing	.3	.4	125.4	38.9	82.0	247
Government	13.8	18.7	27.3	101.2		161
Insurance, banking and real estate		.6	8.8	16.6		26
Utilities and railroads		.6	20.8	33.6		55
Education				96.0		96
Household workers				144.0		144
Miscellaneous		71.1	3.8	74.1		149
All industries	1,261.7	234.8	481.5	700.0	82.0	2,760

The Employment Multiplier

Special interest usually attaches in an economic base study to the "employment multiplier"—the ratio of "nonbasic" to "basic" or "export" jobs within a community. All of the 2,760 jobs except the 700 listed in the column "sales to local residents" can be considered to be export generated. (It will be remembered that sales to tourists are a type of export and that out-of-county jobs are considered to be labor exports by Franklin County.) Consequently the number of export or basic jobs is 2,060. The employment multiplier is 700 divided by 2,060, or 0.34. Roughly it appears that one additional job is created in the county for every three jobs in the export activities. Suppose 600 jobs were lost in the oyster industry of Franklin County because of depletion of supply or other reason. It appears that about 204 jobs in retailing, government, education, and other service activities would also be lost after a period of adjustment.

The calculated multiplier, 0.34, is lower than is usually found in economic base studies. Several factors work to hold down the size of the multiplier. Eeven the largest town in Franklin County, Apalachicola, is too small to make it economically feasible to produce many of the goods required to satisfy local needs for food, clothing, sporting goods, tin cans, cartons, and so forth. The ocean border to the south and the almost unpopulated forest lands to the north do not provide a surrounding population to which such products could be sold if manufactured locally to meet the county's wants. The resulting need to import a great many consumer and industrial goods holds down the size of the multiplier since "nonbasic" employment in the county consists so largely just of the retailing of imported items. A further factor holding down the employment multiplier is the substantial importance of out-of-county employment of Franklin County residents. Persons who commute to a larger community to work usually purchase a substantial portion of their needs in that community, holding down the service activities where they reside.

According to the results set forth in table 9, if the Franklin County oyster industry were entirely lost 1,262 jobs related to oyster exports (including conservation, public health and similar positions), 25 jobs related to the sale of oysters to tourists and local residents, and 438 jobs based on the local spending of oyster-generated income would be lost—a total of 1,725, or 62 percent of the total employment in the county. This indeed indicates a narrow economic base in Franklin County with an accompanying vulnerability to serious economic distress.

Chapter 3

VALUE ADDED ANALYSIS OF THE FRANKLIN COUNTY OYSTER INDUSTRY

Purpose of a Value Added Study

The purpose of a value added study is to measure the contribution to the final value of a product of each stage of production through which the product passes. In the fishing industry generally, and the oyster industry specifically, there has always been a serious lack of data in this area. The Fish and Wildlife Service of the Department of the Interior makes a very valuable contribution in the area of statistical information but their work usually stops at the level of the catch of the fisherman. This can be misleading as to the importance of fishing activity in that, like the modern farmer, the fisherman receives only a small share of the final value of the product which he initiates.

A value added analysis is also useful in that it gives a clearer picture of how many individuals are really dependent directly upon the product in question for their livelihood. In this report we are studying the oyster industry of a small, Southern seaside area consisting of three towns. The local employment "multiplier" effects were described in the previous chapter. This does not give the complete picture, however, since both employment and income are also generated outside Franklin County where further transportation, processing, warehousing, and retailing take place.

The information in the present chapter consists largely of data taken from the records of the largest repackers in Franklin County plus other data which were obtained directly from the Fish and Wildlife Service. The oysters handled by these major repackers made up over 60 percent of the total oyster landings in the county in November 1963. For the year as a whole these same repackers would handle about 75 percent of the total oysters landed. From these repackers it was possible to obtain detailed data on the quantity, value, size of containers, and destination of all oysters shipped by them in November 1963. A detailed study of the destination of Franklin County oysters brings out some interesting facts. In November 1963, over a third of the oysters shipped out of Franklin County by these two large repackers went to retailers located in the Southern United States. A slightly larger amount was sent to Delaware for further processing. From this point they are shipped to all States of the coterminous United States and to Canada. Outside the South, the largest retail market for oysters shipped directly from Franklin County was the Midwest which received 25 percent. Chicago alone received almost 20 percent of these oysters.

It is important to remember that the repackers who supplied the data from which the above figures were derived handled only 60 percent of the total oysters landed in Franklin County in November 1963. Almost without exception the other oysters were retailed within the South either fresh or on the half-shell.

Characteristics of the Industry

Oysters landed in Apalachicola can be classified into two types: (1) those intended for direct sale and consumption, either as fresh shucked oysters or on the half-shell, and (2) those intended for shipment out of Franklin County for further processing and eventual distribution on a national market. This distinction does not become important until we get past the stage of the repacker. Up to the stage of the repacker all oysters go through the same process, with the exception of half-shell oysters, of course.

The value of the oyster catch to the tonger was relatively easy to determine. This information is collected by agents of the U.S. Fish and Wildlife Service on a daily basis.

The Franklin County oyster industry operates in a fashion quite common to other areas. The tonger brings his oyster catch to a packinghouse

Preceding page blank

where he has been given a stall. This stall usually consists of a simple cement enclosure in which the tonger deposits his oyster catch. Next, the shucker, who is almost always a woman and frequently the tonger's wife or daughter, proceeds to shuck the oysters. Once out of the shell the oyster is placed in gallon containers which are provided by the packer, the owner of the shucking house. When the gallon container is full the shucker takes it to one of the packer's employees (again usually women) who dumps the oysters onto a grate and washes them with water from a small hose. At the same time she looks for bits of shell which might not have been culled out. Next the oysters are put in a new gallon container and the shucker is given credit for producing a gallon of shucked oysters.

When the packinghouse has completed the aforementioned operations, one of two things may be done with the shucked oysters. Either they will be sold directly to a retailer, usually not very distant, by the packinghouse or they will go to a repacker, i.e., an individual or firm that specializes in buying oysters from packers and selling to retailers or distributing for further processing. The repacker's operation is in many ways identical to that of a wholesaler. Since the repacker has an operation of a much larger scale than any individual packer he is often able to lure the best retail markets away from the individual packers. This is partly due to his ability to give quantity discounts but is also due to his ability to supply oysters when, and in the quantity, needed by the retailer. Specialized selling activity and more attractive packaging are other advantages possessed by the repackers over the packers.

The effect of this competition on the individual packers is that they are either forced to go into less desirable retail markets or to sell their product to the repackers. Another important aspect of the repacker's influence is that by offering to buy all of the oysters offered at a given price he sets a floor on the price of oysters. It is impossible for any other repacker to pay a lower price for oysters than the highest which is offered in the community since, if he does, the packers who formerly sold to him will go elsewhere.

When the repacker receives a gallon of oysters from the packinghouse, the oysters are again washed and inspected for shell particles. Then the repacker packs the oysters which are to go directly to retailers or institutions in containers ranging from 8-ounce to 1-gallon size. In a survey based on 60 percent of the landed oysters for November 1963, it was observed that the relative use of different size containers, by weight of oysters packed, varied as follows: 8-ounce—26 percent; 12-ounce—38 percent; 16-ounce—28 percent; half-gallon—1 percent; and gallon—7 percent. It should be noted that the last two sizes are in most instances reserved for institutional sales.

In some instances a repacker may not sell all of his oysters fresh to retailers. Either in his own plant or in another plant of the same company, the repacker may process his oysters into breaded and frozen form or into oyster stew. These two forms are now very popular for sale through retail grocery markets.

So it is quite easy to see that on the trip from the fisherman's tongs to the consumer's fork the oyster undergoes many operations which increase its final value. How much of this final value is added at each stage is the question which value added analysis attempts to answer.

It is important, at this time, to remember that the above discussion applies only to shucked oysters. However, a very important part (especially in value terms) of the oyster industry is the bag oyster. This is the oyster which finds its way to the market in the form of the half-shell oyster. The packer pays the tonger by the bushel of unshucked oysters and supplies the bags. The packer purchases the bag oysters and sells them directly either to restaurants or to "oyster bars" or he may sell them to a trucker who specializes in wholesaling oysters. A repacker usually does not participate in the half-shell market.

Since the half-shell or bag oyster passes through a relatively small number of stages from fisherman to consumer, one might expect the value added to be small. However, this is not true since the retailers handle the oysters on a very large margin between cost and selling price.

Value Added to Franklin County Oysters

Our discussion of value added to Franklin County oysters will be divided according to the four forms in which the oysters are brought to market. These forms are fresh oysters, fresh frozen and breaded oysters, oyster stew, and half-shell oysters. As will be shown in later discussion the demand for each of these forms and the per-

cent of the final value shared by each factor of production varies sharply from form to form.

For reasons stated earlier, our study centers around the activity in the oyster industry in the month of November 1963. All estimates are for that month only. In the final chapter these estimations will be extended to give a wider ranging estimate for the oyster industry for a whole year.

In November 1963, over 14,000 gallons of fresh oysters were sold from Franklin County in containers ranging in size from 8 ounces to 1 gallon. To make an estimate of the final value of these oysters it was first necessary to make an intensive study of the prices, sizes, and locations where these oysters were sold.

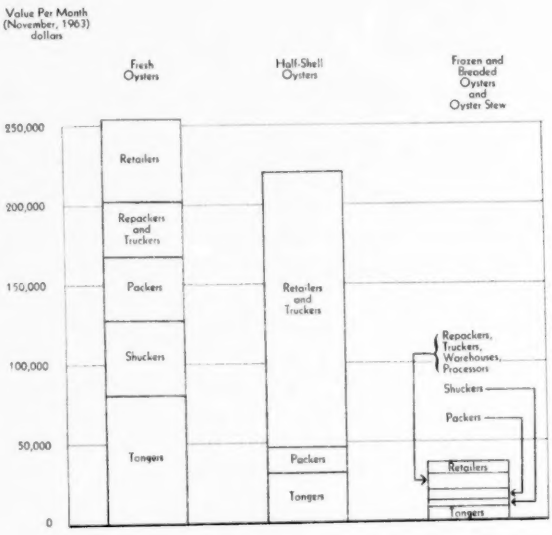
A survey was made by letter to major retailers of Franklin County oysters outside the State of Florida. St. Louis, Mo., Chicago, Ill., Los Angeles, Calif., and Atlanta, Ga., are a representative sample of the cities in which individual firms were contacted. From these firms and from industry representatives, data were obtained on retail prices for Franklin County oysters, standard and select, by size of container and final destination. Once the weighted average retail price was calculated it was possible to estimate the total retail value of fresh Franklin County oysters, including those reshipped from Delaware for November 1963. This is estimated to be $253,117.

Fresh oysters go through five major stages of production and distribution in which value is added. These stages involve the tonger, the shucker, the packinghouse, the repackinghouse, transportation, and the retailer. Estimates for value added by the stages up to the repacker were easier to calculate than for the other stages. Using the average price paid to the tonger and shucker per gallon of shucked oysters in November 1963, total value added at these stages was estimated by multiplying this figure by the total gallons of shucked oysters produced in this month.

It was found that packer and repacker charges per gallon handled were quite uniform for similar operations. This permitted calculation of value added to shucked oysters at these stages.

Through several individuals who work closely with the retailers of fresh oysters it was possible to arrive at a figure for the average retail markup, per gallon oysters. The above described value added breakdown, by stage of production, is depicted graphically in chart 6.

CHART 6.—*Value added at various stages to Franklin County oysters, November 1963*



Though frozen and breaded oysters and oysters incorporated into oyster stew are joined together in the graph, calculations were made for each form separately. The same procedure was followed for the lower stages of production as has been described above. Information on value added at the higher stages of production was gained with assistance of members of the industry who furnished data upon which the calculations were based. The total value of frozen and breaded Franklin County oysters for November 1963, is estimated at $30,844. For oyster stew the estimate is $4,899 which includes oysters, milk, can, etc. It is important to mention at this time that for the year 1963, as a whole, the total value of oysters in these two forms would be comparatively greater than is shown in chart 6 for the month of November 1963. Of all oysters from Franklin County which are processed outside the county, for the month of November 1963, 60 percent were sold fresh, 35 percent were sold as fresh frozen and breaded, and 5 percent were incorporated in stew. For the whole year, however, 25 percent were sold fresh, 45 to 55 percent were sold as fresh frozen and breaded, and 20 to 30 percent were sold as oyster stew. This divergence is a result of a shift away from fresh sales and toward sales in the latter two forms during the spring months.

The last form in which Franklin County oysters are sold is on the half-shell. The retailers of this

TABLE 10.—*Estimated Proportion of Final Retail Value Added at Each Stage—November 1963*

	Percent
Fresh oysters (shucked):	
Tonger	32
Shucker	19
Packer	15
Repacker and trucker	14
Retailer	20
All stages	100
Half shell oysters:	
Tonger	14
Packer	7
Trucker and retailer	79
All stages	100
Frozen and breaded oysters:	
Tonger	25
Shucker	15
Packer	12
Repacker, trucker processor, warehouse	28
Retailer	20
All stages	100
Frozen oyster stew:	
Tonger	22
Shucker	13
Packer	11
Repacker, trucker, processor, warehouse	34
Retailer	20
All stages	100

product vary in size from the neighborhood "oyster bar" to the fanciest of restaurants. It is in this form that the tonger, the original "producer" of the oyster product, gets his smallest share of the total value—about 14 percent. A big reason that the oyster industry hasn't been motivated to engage in more sales of oysters on the half-shell is precisely that it is not the oyster industry that gains so much from the sale of these oysters but rather the retailers who are considered outside the industry. The total retail value of half-shell oysters from Franklin County for November 1963, was estimated at $219,626. This figure is especially large when one considers that only about 27 percent of all oysters landed were retailed in this form whereas 60 percent of all oysters were retailed in the fresh shucked form with a total retail value of $253,117.

Table 10 shows in percentage form the estimated proportions of final selling value added at each stage between tonging and retailing for the different forms in which Franklin County oysters were sold. The tonger appears to realize an average of about 25 percent of the final value. (This is considerably more than the wheat farmer gets out of a loaf of bread.) The shuckers received 13 to 19 percent of the final value. Retailers received 20 percent of the final selling value for all except half-shell oysters, where the markups are large. Percentages of value added at other stages vary according to the form of the oyster product, as may also be seen in table 10.

It should be emphasized that it was necessary to concentrate on one month—November 1963—in making the value-added estimates shown in this chapter. Changing forms and prices from month to month, and the need to go directly to the detailed records of cooperative repackers, necessitated this restriction of the time period. However, the concluding chapter will include estimates of the ultimate contribution for the year 1963, of Franklin County oysters to national income as well as to Franklin County income.

Chapter 4

SUMMARY OF RESULTS

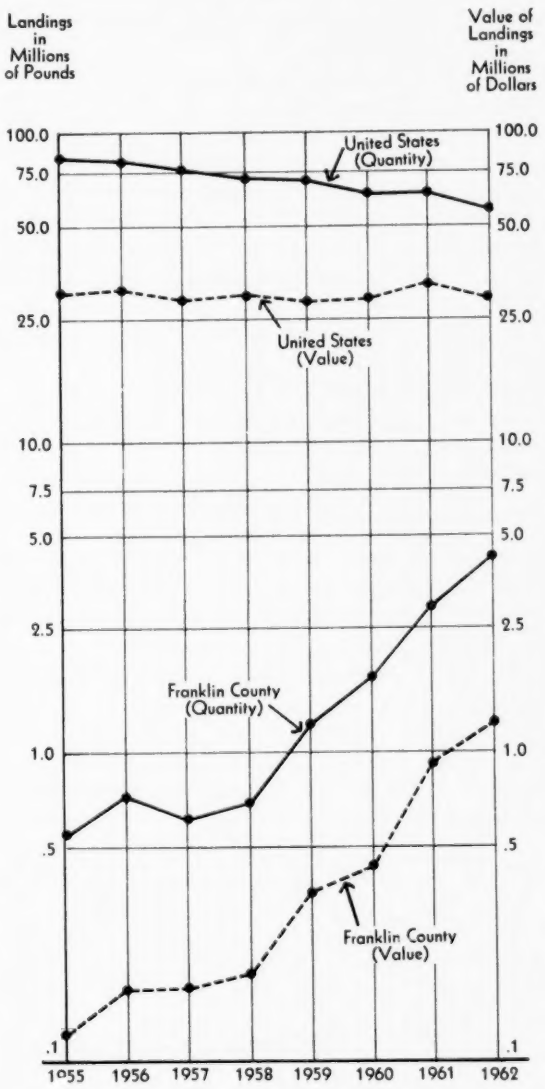
Franklin County, Fla., is an excellent example of an area which is dependent heavily on a narrow economic base—the export of products of the sea, especially oysters. While population in Franklin County is not declining as it is in some north Florida counties, the rate of economic and population growth is low when compared with that of the State as a whole. Per capita personal income in the county in 1963 was even lower than that of Mississippi.

Although the oyster industry of the Gulf of Mexico has virtually overtaken that of Chesapeake Bay on a volume (though not value) basis, Franklin County oyster landings fell off seriously in 1963 and 1964. Partly as a result of the newly closed season in the summer of 1965, industry and government sources expect a recovery during the fall and winter 1965 harvesting season. The increasing importance of Franklin County landings, prior to the 1963–64 slump shows up clearly in chart 7.

The long view of the oyster industry suggests a need for wiser public policy in pollution control and other conservation measures. In 1880 the quantity of Eastern oysters, measured in terms of edible meats, was 153,405,000 pounds. A peak of 170,695,000 pounds was reached in 1890. By 1940 the harvest had fallen to 78,391,000 pounds.[10] As shown in chapter 1 of the present report there has has been a further decline to 46,600,000 pounds (preliminary) in 1963. On a per capita basis the historical decline looms even larger—from 3.56 pounds per person in 1889–92 period [11] to 0.25 pounds per person in 1963, as shown in chapter 1.

Annual consumption of all food in the United States is remarkably steady at a little over 1,500

CHART 7.—*Oyster landings and values, United States and Franklin County, 1955–62*



[10] These data are from Harden F. Taylor and Associates, *Survey of Marine Fisheries of North Carolina* (Chapel Hill: University of North Carolina Press, 1951), p. 500.

[11] Taylor, *ibid.*, p. 408.

pounds per person.[12] Using this figure it may be said that around 1890 the Eastern oyster made up in weight a little over two-tenths of 1 percent of the average diet but that by 1963 it made up less than two one-hundredths of 1 percent of the average diet. Not only has oyster production failed to keep up with the population growth but it has actually been decreasing during a period of rapid population growth.

Economic Base of Franklin County

The importance of oysters to Apalachicola and Eastpoint is apparent to the most casual observer. A main purpose of this study has been to measure this importance carefully, considering both direct employment and income generated by oyster harvesting and processing and the indirect "multiplier" effects on employment and income in the supporting retail and other nonbasic trades.

Full-time employment in Franklin County in November 1963, was 2,760 persons, according to the survey conducted for this project with the assistance of the chambers of commerce of Apalachicola and Carrabelle and the Apalachicola office of the Fish and Wildlife Service. Of this number 1,561 worked in the fishing industry, with 1,273 of these being associated with the oyster industry.

All but 700 of the November 1963, jobs in the county can be considered to be "basic" or "export based." The ratio of 700 to 2,060, or 0.34, is the estimated employment multiplier. This is lower than for most communities because the surrounding territory (mainly ocean and swamp) does not provide an adjacent population to permit much production of foodstuffs, clothing, or industrial materials on an economical scale. The principal Franklin County communities do not in themselves provide a large enough population for nearly as much self-sufficiency as is found in the average city or town. For example, milk consumed in the county must be brought in from dairies located outside the county. Also, there is no bakery of substantial size within the county, thereby necessitating the importation of this commodity.

Because of its narrow economic base Franklin County would be very hard hit by loss of the total oyster industry or any substantial portion of the industry. It can be estimated that 1,725 jobs in the county or 62 percent of all November 1963, employment was based directly on the oyster industry or indirectly on local sales generated by the income brought into the county by oyster exports.

It was not considered desirable to collect dollar sales or income data by questionnaire due to the probability of noncompliance or inaccuracy in reporting by businessmen. However, total personal income for Franklin County has been estimated at $10,511,000 for 1963.[13] This makes it possible to estimate the income generated by the oyster industry by assuming proportionality between jobs and income. (This may slightly overstate the income-generating importance of the oyster industry because it is more labor-intensive than the average activity; however, this does not appear to be the case with retailing and most other local activities based indirectly on income from oyster exports.)

Taking into account the fact that November is an unusually active month in the oyster industry, we estimate that about 55.3 percent of yearly income (compared with 62 percent of November 1963, employment) can be attributed to that industry. While oyster tongers received $1,089,803 in Franklin County in 1963, shuckers, packers, employees of repacking houses, and others associated with the industry received $3,246,990 in income, according to our estimate. An additional $1,474,510 in personal income is estimated to have been generated indirectly by the oyster industry in 1963, taking the form of wages, salaries, interest, and profits connected with retailing, government and other service activities in Franklin County. In total, $5,811,303, equal to 55.3 percent of all personal income in the county in 1963, is estimated to be due directly or indirectly to the oyster industry.

Value Added

Franklin County oysters are sold in all States of the conterminous United States and also in Canada. Much of the nationwide distribution occurs after the reprocessing in Delaware of a sizable part of the catch in Franklin County. At the Delaware location they are in part frozen, breaded, or

[12] J. P. Cavin and Marguerite C. Burk, *Consumption of Food in the United States*, U.S. Department of Agriculture, Bureau of Agricultural Economics, 1949.

[13] *Business and Economic Dimensions*, College of Business Administration, University of Florida, May 1965, p. 3.

incorporated in frozen oyster stew. Use of a large number of warehouses throughout the country permits wide distribution of frozen oyster products. While Chicago and the west coast of the United States are important markets, the same is not true of the New York area because of the entrenchment of the Chesapeake Bay oysters in this market.

It has been estimated in the present study that the tonger gets between 14 and 32 percent of the final selling value of Franklin County oysters. A weighted average of 25 percent has been calculated as the tongers' share of final retail value. A handy (and we believe reasonably accurate) rule of thumb is that the total contribution of the Franklin County oyster industry to national income is four times the amount paid to tongers. This can quite reasonably be considered to measure the actual total importance of the industry.

It has been the general practice to measure the size of a fishery by the value to the fishermen alone. Thus the amount received by county tongers in 1963 is reported by the Fish and Wildlife Service as $1,089,803 whereas it seems reasonable to estimate that the true value after processing and distribution was four times this amount, or about $4,359,000. Since resources devoted to the industry tend to be difficult to reallocate to other uses, this concept of the potential loss of annual national income, if the Apalachicola oyster industry were lost due to pollution or disease, seems appropriate in measuring benefits versus costs of preserving this fishery.

U.S. GOVERNMENT PRINTING OFFICE : 1968 O—791-111